

Remarks

Claims 1-3, 6, 8, and 13 were rejected as anticipated by ARSLAN et al. 6,615,174. The Official Action discusses claims 16-19 following the rejection under §102, but the basis for the rejection of claims 16-19 is not given. Reconsideration and withdrawal of the rejection are respectfully requested.

ARSLAN et al. prepares phoneme-by-phoneme codebooks for the source and the target, where the target codebook has entries that correspond to entries in the source codebook (column 6, lines 46-48). When input speech is received, the input speech is divided into frames corresponding to the entries in the source codebook (column 7, lines 13-29). Each frame is weighted and mapped to the corresponding target codebook entry. The input speech signal is transformed into the target by using the weights and corresponding target codebook entries (column 2, lines 39-53). Note that the audio signals used for preparing the codebooks in ARSLAN et al. do not correspond to the input speech that is input later and corrected to the target.

That is, in ARSLAN et al. the input speech is segmented and each segment is corrected based on the corresponding target codebook entry (the correspondence being made through the two codebooks). The input speech is never compared to the target, but is corrected based on weights and entries in the target codebook.

As is apparent, ARSLAN et al. does not disclose the steps of comparing the spectra of the model audio signal (or intensity in claim 19) and the imitation audio signal and correcting the imitation audio signal based on the comparison. ARSLAN et al. does not compare the "imitation audio signal" (i.e., the input speech) to the "model audio signal" (i.e., the target) and corrects the input speech based on weights, not a comparison with the target.

By way of further explanation, the technique in ARSLAN et al. involves three separate inputs (the two codebooks and the input speech), where the input speech is converted to frames based on source codebook framing, the corresponding frames in the target codebook are identified, and the input speech is corrected based on the weights from the corresponding frames in the target codebook. In contrast, the present invention uses two separate inputs (the model and imitation audio signals), where these two signals are compared to make the correction.

Accordingly, at least the comparison and correction steps of claims 1 and 19 are not disclosed in ARSLAN et al. and the claims avoid the rejection under §102.

Claims 4-5 were rejected as unpatentable over ARSLAN et al. Claims 9, 11, and 14 were rejected as unpatentable over ARSLAN et al. in view of LEE et al. ("A New Voice Transformation Method Based on Both Linear and Nonlinear Prediction Analysis," (3-6 October 1996). Claims 7, 10, 12, and 15 were rejected as

unpatentable over ARSLAN et al. in view of GIBSON et al. 6,336,092. Reconsideration and withdrawal of these rejections are respectfully requested. These claims depend from claim 1 and are allowable for the same reasons.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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